# Outdoors in georgia

September 1974

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## FEATURES

Summer's Green (Photo Essay) . . . . . . Bob Busby 2
Passenger to Oblivion . . Bill Morehead 4
Cobia . . . . . . . . . T. Craig Martin 11
Clear-cut . . . . . . . . . . Aaron Pass 14
Under Five Flags . . . . . . Joe Cullens 21
Well-loved Dove . . . . . . . Aaron Pass 25
Bow Hunting Primer . Gibson Johnston, Jr. 28

## DEPARTMENTS

Outdoor World . . . . . . . . . . . . 31
Book Reviews . . . . . . . . . . . . . 31
Outdoor Calendar . . . . . . . . . . . 33

**ON THE FRONT COVER:** Midsummer's green is one of nature's most glorious creations. Bob Busby found this example (and the others in his photo essay on pages 2 and 3) near Unicoi in the north Georgia mountains.

**ON THE BACK COVER:** The Peregrine Falcon. Prints of this dramatic painting are available, and each purchase will help the Georgia Special Olympics Program. See our editorial on the facing page.

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# Special Olympics

Going out for a few sets of tennis after work tonight? Or a quick nine holes of golf? Or perhaps tonight is your bowling night, or the evening you've set aside for handball or basketball or a few laps in the pool.

Many of us more or less regularly fool around in some mildly competitive sports. Sometimes we claim we're doing it for our bodies (staying "in shape"); usually, though, the true reason is a bit more complicated.

We indulge in sports to test ourselves, to try our skills against our friends' in a situation where the stakes are low. Winning is fine, but losing doesn't cost us very much. And everyone gains from the companionship, from the fun of being together.

But many Georgians don't have a chance for the simple pleasures of this companionable competition. Until very recently, in fact, very few of our retarded citizens could find a coach or a team or a playing field suited to their needs. Not many of the rest of us realized their need, and even fewer of us understood their plight enough to find a solution.

The Georgia Special Olympics program is attempting to change that. Last year more than 16,000 handicapped Georgians (ages 2 to 63) found exciting new challenges in sports programs organized by the Special Olympics. And more than 4,500 volunteers began to understand some of the problems faced by our retarded citizens.

No one loses in Special Olympics programs, although some win a little more. "Winners" (not always those displaying the most athletic prowess) from local and district meets move on to the annual state meet, and a few of these even go on to the "international" meet held every four years.

Winning isn't the main idea, though. For most of the participants, just joining the activity is the major victory. Finding a place and a way to compete, and a group to compete with, these are winnings enough.

Although the Department of Natural Resources pays many of the Special Olympics' administrative expenses, most of the money for this vital work comes from donations collected by the Georgia Special Olympics Executive Committee. And from a telethon conducted by Atlanta Falcons star Tommy Nobis, a tireless worker for the Special Olympics.

Because there are a lot of Georgians who need the chance for Special Olympics activities, the Special Olympics needs your help. They need your time and skill. And, yes, your money.

One relatively painless way to contribute to the Special Olympics this year is to buy a print of the marvelous peregrine falcon that adorns our back cover. If you order one of these limited edition signed prints before Jan. 15, 1975, half the $60 purchase price will go to the Special Olympics. It's a beautiful print to own or give, and there can hardly be a better cause.

To order your print (or prints — Christmas is drawing near), send your check for $60 made out to SCORE, Inc., to Score, P.O. Box 89144, Atlanta, Georgia 30312.

# Summer's Green

*Photos by*

*Bob Busby*

# Passenger to Oblivion

by Bill Morehead

The first bird came in swiftly and soundlessly, heading for the dead white oak at the end of the old field. As it neared the tree it dipped low—almost to the ground—and, climbing at the last moment, made a fluttering stall to alight on the highest limb. It stood proudly, with its head and tail forming a straight line.

Two more of its kind came across the field, performing the same fluid aerobatics, to join the first bird. Two more came. Then six. Then a hundred, two hundred, a thousand.

And still they came. The 10-year-old boy, watching with one hand holding a just-emptied slop bucket and the other resting on the split rails of the pig pen, moved a short distance and sat on a stump, fascinated. Just last Saturday (he remembered he and his Paw had hitched the mule and jolted down the mountain in the old wagon to Lafayette to barter some turnips for salt and sugar) he had heard that the birds were coming back. These were the first he had seen in nearly a year.

And still they came. He pulled a couple of pecans from the pocket of his homespun overalls and cracked them absentmindedly as he watched the white oak become obliterated by the birds. Soon, the oak looked like a tree made of birds. And the sun, setting right across the tip of McElmore Cove and behind Lookout Mountain, gently cast its October gold across the chestnut grove on Pigeon Mountain and turned the russet-colored breasts of the birds into a sea of amber.

And still they came. The "kee-kee" sound of the perching birds was answered by the "tret-tret" of those alighting, until what had been a pleasant choir of a hundred voices became the stunning din of ten thousand.

And still they came. The boy's mind whirled with images ushered in by the swarming birds. Food. Barrels of food. Feathers for new mattresses and pillows. Cash—hard money cash from the markets of Chattanooga. A sandy,

tough-as-nails, fallow field made rich again by the dung of a hundred thousand feathered migrants: next spring, boldly thrusting green shoots of healthy corn and peas would again mask the true barren nature of the field.

And still they came. The bounty called the Passenger Pigeon returned to its namesake, Pigeon Mountain in northwest Georgia, arriving on that October afternoon in 1874. They had come again.

But they come no more. Pigeon Mountain stands waiting in 1974, little changed in 100 years, waiting for the birds to come home again. But the birds don't come—the passenger pigeon is extinct.

*Ectopistes migratorius*—the passenger pigeon—was a little larger than a mourning dove, its tail feathers were longer, the iris of its eye was red and its back was a bluish gray. The breast of the male usually displayed a vivid russet, but could vary from the red of the robin to the pale yellow of the mourning dove. The female, smaller than the male, looked more like the mourning dove. The legs of both sexes were red.

The "blue meteor" was thought to be the most numerous bird in the world. The Latin name means "migrant wanderer" and refers to the species which composed up to 40% of the *total* bird population of North America at the time of Columbus. Some 3 to 5 billion of these birds traveled from California to Canada to Georgia, preferring the east and mid-west to the western regions. In contrast, it is estimated that only 6 billion birds of *all* species inhabit America today.

Migrating and nesting flocks were awesome sights. Alexander Wilson—the founding father of American ornithology—visited a breeding place near Shelbyville, Kentucky, in 1806. The site was more than 40 miles long and 6 miles wide! Averaging more than 100 nests to each tree, the site had a ground floor strewn with broken limbs and covered with a snow-like guano of ejecta, broken eggs and dead squabs. Impressive enough—but only 60 miles away Wilson noted a similar site.

In 1813, Audubon described a migrating flock so large that "the light of noonday was obscured as by an eclipse." He traveled from Louisville to Hardensburg, Kentucky—a distance of 55 miles—and during all that trip the sky was filled with birds. Three full days passed before the entire flight had passed. In three hours, Audubon estimated the number of pigeons passing overhead as one billion, one hundred and fifteen million, one hundred and thirty-six thousand (1,115,136,000). Only three hours worth of a *three day* flight!

From those days of extreme abundance to oblivion? How? The answer is not simple, extinction never is. What hindsight makes clear, however, is that the survival strategy of the passenger pigeon didn't include the white man's "taming of a continent." As the pioneers moved inward, they found the pigeons there for the taking; and with millions and billions seen yearly, nobody could hope to discourage their slaughter. Nobody did until it was too late. The slaughter was every bit as awesome as the number of birds: whole towns adjourned to the pigeon roosts during migrations and barrels upon barrels of pigeons were shipped to market.

Indeed, the activity was so common that a new trade arose, "pigeon netting." Pigeon netters were the look-alike counterparts of the "buffalo runner." The dedicated netters migrated with the birds, telegraphing each other and their markets of the pigeons' whereabouts and casting their finely woven nets in the roosts at night. They captured unbelievably large numbers of birds, especially the young squabs, to be shipped to market.

The birds usually were field dressed, salted, and shipped to market in barrels—with 44 dozen (528) birds to the barrel. In New York, the market of 100 barrels a day could hold for weeks without a drop in price. In his book, *The Passenger Pigeon* (Univ. Okla. Press, 1973), A. W. Shorger notes prices ranging from 50 cents a dozen in Boston (1834) to $3.50 per dozen in New York City for staff-fed birds (1884).

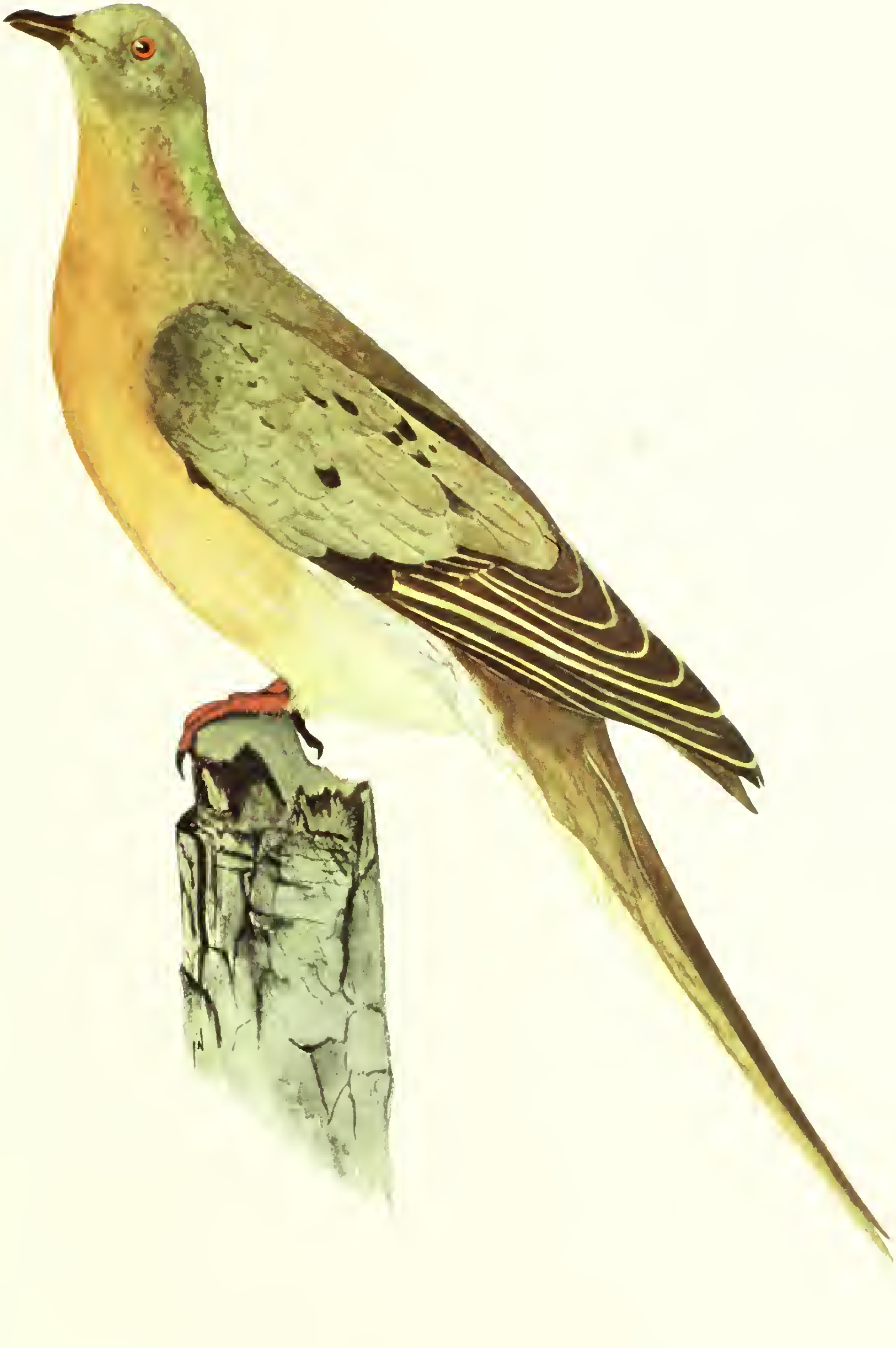
The kill increased year by year in the 19th Century and, as American society became better organized, so did the pigeon industry. The markets at first came to tolerate wild pigeons, then to expect them, and finally to demand them —at any price. The most sought after birds were the young squabs, so nesting sites were the best collecting areas.

But in the mid-19th Century the destruction of the primeval forests took its toll, for the passenger pigeon demanded tremendous forests in which to roost, nest, and feed. The mast (especially beechnut) that these forests provided was the vital food for the hordes of "blue meteors" that visited seasonally.

Diseases must have played a large part. No "flocking" animal escapes a periodic epidemic, and the passenger pigeon was not happy unless crowded by his own kind. Birds weakened by anemia or injury provided inviting hosts for innumerable diseases.

And—we now know—a seemingly unimportant aspect of the passenger pigeon's behavior suddenly became critical. All species produce more young than can survive, and it is this phenomenon that leads to the "survival of the fittest" biological principle. Survival strategies, however, may differ. Some birds, like the eagle, produce few eggs but care for their

Painting by Liz Carmichael Jones



young tenaciously. Others, like the mourning doves, produce a few eggs at a time but stand ready to repeat the process if the young don't survive.

The passenger pigeon's strategy was unique, but it worked well for millions of years. Indeed, based on numbers, the strategy was the most successful of all—until the 19th Century. *Ectopistes migratorius* mated only once or twice a year. The nests were flimsy and the mating invariably produced only one white-colored egg, a little larger than a dove's. If the young squab was lost, little attempt was made to repeat the process that season.

How did they survive? Over the years—before man and when living must have been easier—their numbers slowly grew until the billions of birds alive insured that, no matter how many young were lost in a season, enough would survive to replenish the race. However many were killed or otherwise lost at a given nesting site, somewhere other pigeons were successfully rearing their young. An unusual strategy to be sure—but astoundingly successful for millions of years.

Ecologists speak of a "threshold number"—the minimal number of a species necessary to insure its survival from year to year. We don't know the exact threshold number for the passenger pigeon, but we know it must have been extremely large as compared to other birds.

When, toward the middle of the 19th Century, market hunting and massive destruction of the forests assaulted the numbers of *Ectopistes migratorius,* the result was a net loss from year to year in the "standing crop." Sometime in the 1850-1870's the threshold number was breached: this meant that no matter how successful the nesting season was, fewer birds would be around next year.

From 1870 to 1890 disastrous losses accelerated. Even market hunters realized this: it was during this time that "pigeon netting" as a trade became obsolete; however, people just couldn't believe that an animal so abundant as the passenger pigeon could become extinct.

But they were wrong.

Every reason under the sun was given for the decline of the passenger pigeon: mass drownings of flocks over large bodies of water, wild diseases, fires, suicide, poisoning, tuberculosis, hot summers, cold winters, all were blamed for the pigeon's decrease.

Hindsight—that most clear of all viewpoints—tells us that three things caused the passenger pigeon to become extinct: the heedless slaughter, especially of the young at nesting sites; the mass association or flocking tendencies of the birds, and their slow rate of reproduction.

In the 1880's and 1890's passenger pigeons became extremely rare. The last known capture in the wild was, according to Shorger, in Pike County, Ohio, on March 24, 1900.

Drawing by Mel Wolfe

Last survivor —
Died 1 P.M. Sept. 1 1914 in the
zoological gardens in Cincinnati

Drawing by Mel Wolfe

It is truely an ill wind that blows no good: the decline of the waterfowl of North America, the near-extinction of the buffalo, and the complete extermination of the passenger pigeon provided the impetus needed to establish state game and fish departments and resurrected the old Biological Survey of the federal government. And it assured the passage of the migratory bird act, a bill to enforce conservation of our wildlife heritage. Quite simply, that is the reason we have the wildlife we have today.

The birds never came back to Pigeon Mountain after that October day in 1874. Oh, a few were sighted for a couple of years afterward, but times were hard and the young boy bought a farm in Shinbone Valley. The soil there was better and he grew hard and strong raising strawberries and peaches and a little cotton now and then. He had a boy who followed after him, farming the same strawberry fields, and working red-necked in the summer's sun tending the peach orchard, and hunting the quail that lived on the chert ridges.

The first boy died and the second boy grew old and his daughter married a guy of questionable means and gave him a grandson— and this boy now is a 10-year-old listening to the tales of his great-grandfather as told by his grandfather. And this young boy resents terribly never having a chance to see the likes of the "blue meteor" as it swarmed over Pigeon Mountain. A thousand miles away, on a green bluff where the Mississippi River accepts the Wisconsin River, stands a monument. The monument reads

Dedicated
To the Last Wisconsin
Passenger Pigeon
Shot At Babcock, Sept. 1899
This Species Became Extinct
Through the Avarice and
Thoughtlessness of Man

In 1974, in the year of the energy and natural resource crisis, is it possible there's a lesson here?

# Cobia

**by T. Craig Martin**

Photos by Jim Couch

Getting to offshore fishing drops is a pain in the posterior. Right?

It's anywhere from half an hour to three or four hours of tedium, particularly for the small boat man who doesn't have a mate to take over the helm while the captain sleeps or rigs bait or untangles his last guest's "overrun."

Even when the Spanish mackerel are running just outside the sea buoy (as they probably are right now. . .), there's about an hour of dead time between them and most Georgia anglers. An hour of wear and tear on the boat and motor, on the wallet (should you not have noticed, gas prices ain't what they used to be), and on the aforementioned posterior. All in all, it's the worst aspect of an engaging sport.

But it need not be, friends. It need not be. For lurking out there between you and the trolling grounds or bottom drops is a brown and white hunk of muscle and speed ready to test your skill, your muscles, and your tackle. And if you can subdue this bruiser, you'll have a chance at some of the finest fillets ever slipped into a broiler.

To pervert a phrase, "there's cobia under them there buoys." On most days from mid-April til mid-September—particularly at the peak of high tide—there's apt to be a cobia or two under each of those cans you pass on the way out. And if you return by way of another inlet, there'll be a second set of cans and another chance to hook one of these awesome critters.

The cobia are loafing in the shade of the buoys, not really feeding, perhaps, but always ready to take a tempting morsel. They can be found along the weed line or under other offshore debris; however, that's of concern only after you've gotten out there.

Fishing the cans can be quite simple if everything is right: pull within casting distance, toss out a nice big shrimp, then hang on. An inshore "popping" outfit is fine; the 8-foot rod lets you cast reasonable distances, the baitcasting reel and 30-pound line usually will be tough enough, and the bright bobber will drift the shrimp at the proper 5-8 foot depth.

Everything seldom is right, however. If the tide is moving, the helmsman will have terrible time trying to keep the boat a reasonable distance away from the buoy. If there's much wind or chop, casting will be difficut. Under these conditions, the best solution often is to cast with the wind, then let the boat drift with the tide. Which works fine for one angler, but creates incredible confusion if two or three lines are out.

About the time the confusion reaches its most absurd high, of course, there's a strike. A cobia doesn't mess around; he grabs the dangling shrimp and takes off to munch it quietly near the bottom. Any distraction—such as a hook being set—only sends him on his way *much* faster.

Since he's big (anywhere from 5 to more than 50 pounds in our area) and very, very strong, his struggle to reach bottom can have disastrous effects on tackle: lines pop, rods snap, reels screech. Some anglers are lucky, of course—the cobia scrapes their line across the buoy chain, thus saving them more serious losses.

The trick is to strike very hard, then turn the initial run away from the buoy chain. After that, it's just sweat and prayer.

Often there will be two fish near a can, and one will investigate the damage being done to the other, thus bringing himself into the range of an opportunistic angler. It's equally likely, though, that both will be scared away until another day.

There are folks who talk ecstatically of cobia fillets, ranking them above mackerel, dolphin, and speckled trout. It may not be necessary to go quite that far: when you're talking in that fancy crowd, rank hardly matters.

A stop at the buoys on the way offshore can be a great treat, a chance for high excitement and the exercise of daring skill. As an added—and not uninviting—attraction, it rests that portion of the anatomy so sorely tried by long cruises to offshore fishing grounds.

Photo by Aaron Pass

# CLEAR-CUT

by Aaron Pass

Ask any conservationist, environmentalist, ecologist, or even a garden variety nature enthusiast and the odds are excellent that you can get a definite opinion on clear-cutting. You are apt to get it quickly too, because clear-cutting has been a major conservation issue for several years; minds have been made up and lines have been drawn. Opinions usually are extreme—oftimes bitter—and leave no doubt on which side of the "clear-cut" line the opinion-giver stands.

"All age management in even aged blocks," is the terminology preferred by those who favor the practice. They describe it as ". . . one of several scientific tree harvesting methods used to manage forests as a continuously renewable resource."

Their opponents call the practice "a sin against nature," and claim it is ". . . an environmental atrocity. (It) destroys the forest, speeds soil erosion, increases siltation of rivers, threatens wildlife and destroys recreation potential."

But while the topic generates extraordinary quantities of heat, it offers relatively little light to those on the battle's sidelines. *Outdoors in Georgia* herein highlights a few points that might help an innocent bystander.

Basically, clear-cutting and its variations involve removing all the trees in a given area. Both commercially usable and nonusable trees are cut, leaving a cleared area which then may be left to regenerate itself naturally or be prepared for seeding or planting. Beyond efficiency, adherents of clear-cutting claim several benefits from this method: a) the quality of the forest is enhanced by allowing the growth of several tree species which require direct sunlight; b) the forest is kept in a productive stage by the removal of mature, slow-growing stands of trees, and c) wildlife is helped by stimulated food plants on newly cleared sites and by the growth of protective cover on older sites.

The detractors argue that this system promotes an unnatural, artificialized "forest" dedicated primarily to high timber yield, and monocultures of fast growing pines. They claim it results in a relatively efficient "tree farm" at the expense of wildlife habitat, recreation, beauty and other values of the natural forest condition.

"Wildlife values" seem to have been caught in the middle of this controversy, for both sides use wildlife habitat needs to support conflicting claims. One side shouts that clear-cutting benefits wildlife, while the other yells that it destroys habitat.

Unfortunately, both sides are right. Clear-cutting, as it currently is practiced, varies so much in technique, habitat, and attendant activities that no general yes or no can be uttered. Not surprisingly, two different harvest sites might both be called clear-cuts, but differ significantly in physical appearance; and appearance alone does not take into account the many natural variables which can determine whether a particular clear-cut has "good" or "bad" effects on wildlife habitat. In short, the effect of clear-cutting on wildlife almost wholly depends on the unique situation of each habitat.

Professional wildlife managers may disagree over the "good" or "bad" qualities of various types of clear-cuts. They generally agree that clear-cutting, practiced with certain qualifications and limitations, is an excellent tool of wildlife management and provides definite benefits for forest wildlife. These same wildlife professionals also agree that, with no consideration for wildlife, clear-cutting can be extraordinarily damaging.

It may not, however, be apparent that forest-dwelling wildlife can be helped by cutting down a sizeable portion of its home. The answer lies in the demands an animal makes upon its habitat. Relatively few species, even the forest-dwellers, can best fulfill their needs for food and cover in a continuous, mature forest.

Diversity (or variety) of tree and plant species and age-groups is desirable for most animals; thus the old axiom of wildlife management: "to increase the diversity of wildlife species, increase the diversity of vegetative types within the habitat." Of course some creatures re-

*A controlled fire helps both the forest and its wildlife. It clears the fire-prone carpet of pine needles, eliminating a hazard to the forest and allowing food plants to grow for the wildlife.*

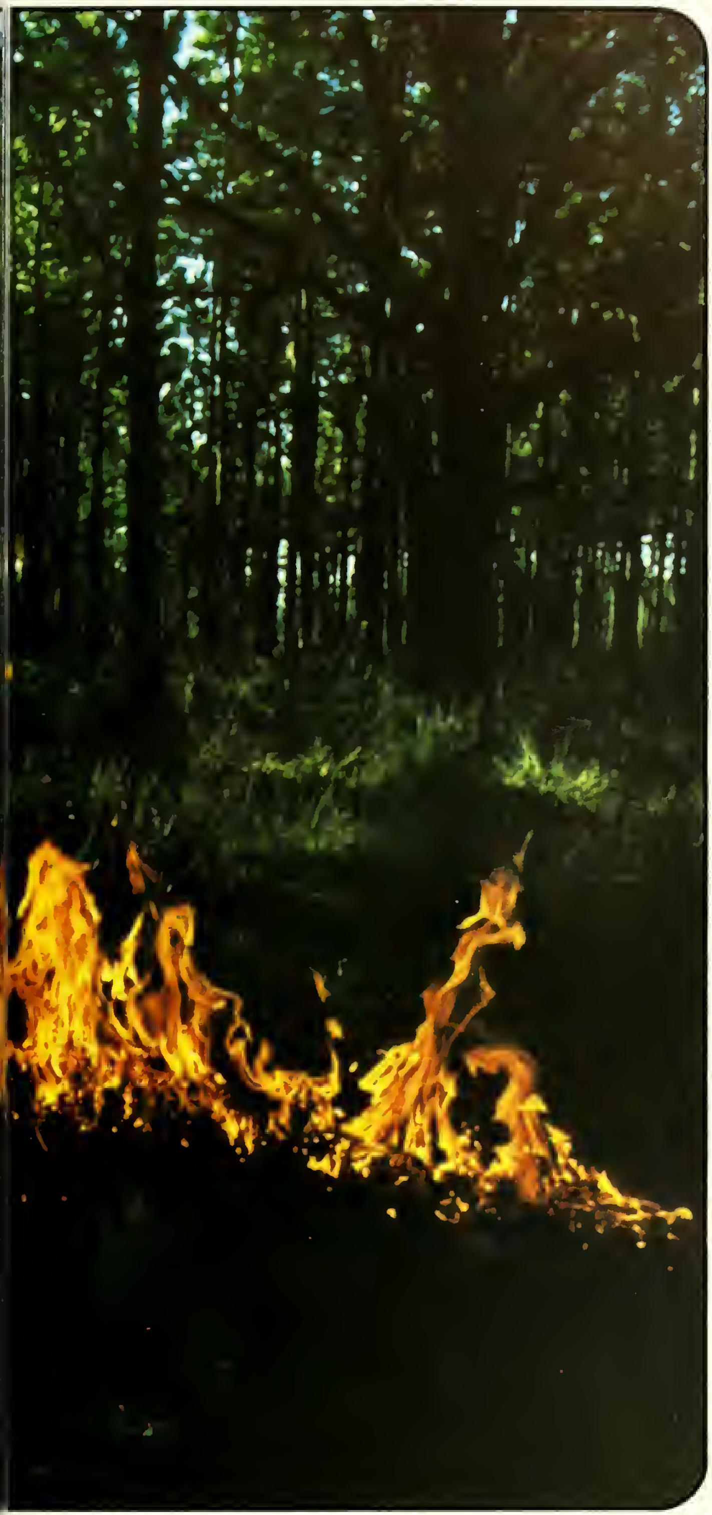


Photo by T. Craig Martin

quire more diversity than others, but almost all benefit from diverse habitat.

Another critical factor is "interspersion," or the distance between the different plants and age groups of plants which create diversity. Most animals are not great wanderers (except migratory species, of course) and tend to remain in a rather limited area called "home range." If an area is to be adequate for a given species, all the necessities for that species' habitat must be located within that animal's normal home range. For maximum wildlife benefit (all species) a diversity of plant species and age classes should be found in a relatively small area.

An example of this is the transitional zone between an old field and a mature forest. There one finds all stages of plant succession (diversity) very close together (interspersion). This is the so called "edge effect" that is so desirable for many wildlife species.

It is by providing diversity and interspersion in the forest that clear-cutting can be beneficial to wildlife. Clear-cutting, that is, carefully planned to yield wildlife benefits as well as timber. Such a system must acknowledge wildlife needs as an important aspect of the overall management program. Some facets of an "ideal" wildlife clear-cut system have emerged:

A) perhaps most important, the individual cuts should be small. An opening of about 50 acres is about the practical maximum for efficient use by wildlife (in mountainous areas 40 acres is the upper limit for watershed protection);

B) the cuts are most beneficial when they are irregular in shape, providing a maximum of edge (diversity);

C) the cut areas should be well scattered through the forest (interspersion), and not cut "back to back";

D) springheads, creek bottoms and other wet areas should not be cut and should be left in mature hardwoods for diversity and watershed protection;

E) in extensive upland stands where pine is favored, occasional patches of mast-bearing hardwoods should be encouraged;

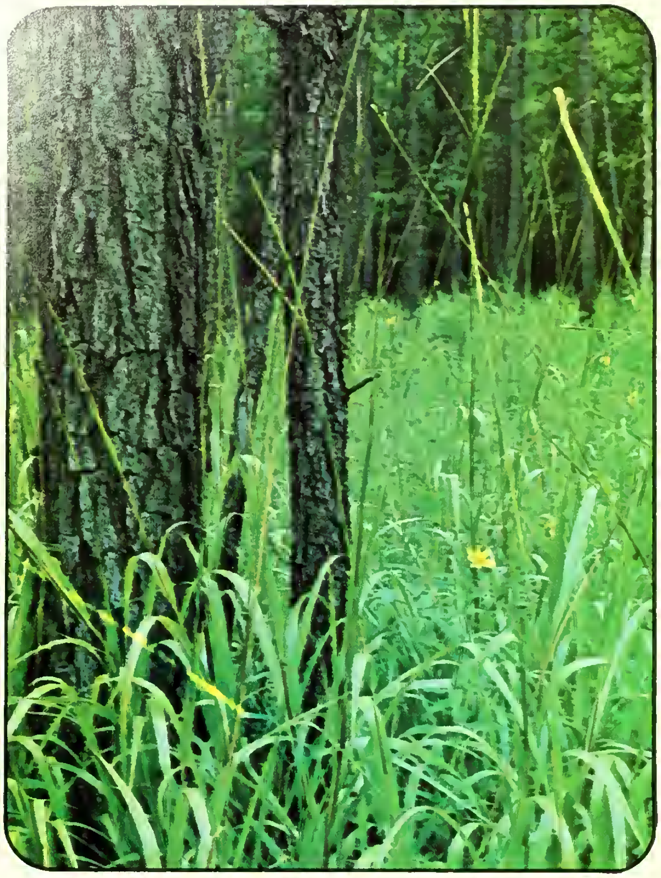


Photo by Cathy Cardarelli

*This stand at the Piedmont NWR has been thinned (for pulpwood) and burned. This lush growth of ground plants followed.*

F) some areas should not be cut at all. These include steep slopes and unique natural and scenic areas. A truly sophisticated multiple-use plan also identifies and protects areas used by endangered or threatened wildlife.

Many landowners and industrial foresters feel that wildlife management is too expensive a fancy to be indulged on commercial timber land. It would be, except that most of the wildlife practices mentioned are standard methods used to establish and maintain a timber crop. Wildlife and timber management are not mutually exclusive and, with planning, can be complementary.

The U.S. Fish and Wildlife Service's Piedmont Wildlife Refuge at Round Oak is a good example of this system at work. This area has been developed using sound forestry practices, but it also includes consideration of wildlife and esthetics: in other words, true multiple-use planning.

The Refuge includes 36,000 acres of typical middle Georgia terrain. Acquired by the Resettlement Administration in 1939, the area was "cottoned-out" farmland growing mostly scrub brush and red clay gullies. Initial efforts at management included reforestation to provide wildlife cover and control erosion.

The overall plan at Piedmont today seeks to promote a healthy, vigorous forest (just what every forester wants) which also is good wildlife habitat and a pleasant environment for outdoor activities.

For management purposes, the refuge is divided into 36 compartments of 800-1000 acres each. These compartment are further subdivided into units of 20-80 acres to roughly correspond to the age of groups of trees in each unit. Each compartment is managed as a separate entity, with specific management practices prescribed for each small stand unit.

The upland pine stands are harvested on an 80 year rotation, which means that the final harvest on any stand occurs when the trees in that stand are 80 years old. This final harvest could be called a "clear cut" because all of the mature trees are removed.

Before this final harvest cut, however, each stand has already provided four harvests of timber on a selective cutting basis. These "thinnings" accomplish several goals of management for both timber and wildlife: the reduced density of the stand removes competition and allows better growth of the remaining trees, and those trees which would be lost naturally in a maturing stand are taken while still profitable. Since a dense young pine forest shades out ground plants, little wild food is produced. The thinning lets in sunlight to stimulate the growth of food plants in the understory. These open stands also promote the growth of young trees, so by the final harvest 3 to 5 foot pines already are started.

Another compatible wildlife/timber management tool used at Piedmont NWR is fire. As shocking as it sounds, controlled use of fire benefits both wildlife and timber. No matter how much a stand is thinned, few if any useful wildlife foods will be produced if the ground is covered by six inches of pine needles. Burning removes this ground litter and allows the growth of valuable food plants under a thinned pine stand. These same pine needles also are highly flammable during dry weather. Controlled burning removes the litter when conditions allow a "cool" fire which does not damage the trees.

Several "rules of thumb" which directly benefit wildlife govern the Piedmont management program. Hardwood trees, which produce highly nutritious nuts and fruit called "mast," are left to grow in suitable locations. Hardwoods normally grow best in moist, fertile areas so creek bottoms, hillside coves and northeast slopes are prime areas. Mast-producing and hollow "den trees" also are left scattered through the upland pine areas to increase diversity for wildlife needs.

Diversity is the key word in the Piedmont wildlife/forest management program. The final harvest sites are well scattered, and no more than 10% of any 1,000 acre compartment is harvested in any eight year cycle. The protection of mature hardwoods along creek bottoms and on suitable upland sites promotes interspersion. To further increase diversity, all logging roads and log loading areas are closed and seeded after use and 5% of each 1,000 acre compartment is kept permanently open.

This well balanced program has led to remarkable productivity of both wildlife and timber. Over the past six years an average of 645 deer have been harvested annually. The current deer population is estimated at one animal per 11 acres. The area also has good population of squirrel, wild turkey, rabbit and quail. All native and normal migrant songbirds are abundant, and one endangered species, the red-cockaded woodpecker, is found here.

A ten year average shows timber receipts at more than $350,000 per year, or approximately $10 per acre each year.

Have wildlife values been totally lost in an effective forest management system? One of the highest deer densities in the state suggests otherwise. Has efficient forestry been unduly hampered by wildlife management modifications?

*A typical planted pine stand produces an area virtually barren of wildlife. The constant shade of the closed canopy and a carpet of pine needles stops the growth of necessary food plants.*

Photo by Aaron Pass

Timber earnings of $10 per acre do not indicate this. This land-use program amply demonstrates that effective wildlife and timber management can effectively co-exist and indeed are quite compatible.

Unfortunately, not all forestry programs are this concerned with wildlife values; some operations ignore them completely. These programs create the large cleared tracts with "World War II" land-scaping and extensive row crops of pine that are very poor habitat for wildlife. Such practices are, in part, responsible for the outcry against clear-cutting.

A well-balanced program takes planning and effort, not just lip-service and tokenism. A few miniscule "nature reserves" and wildlife sanctuaries tacked on after the harvest are not the answer. A responsible management plan which acknowledges the many values of a forest ecosystem is needed.

In theory clear-cutting is neither good nor bad for wildlife, but in practice it almost always is one or the other. Simplistic statements such as, "Clear-cutting is good (or bad) for wildlife," uttered by both sides of the controversy do not adequately reflect the real situation. Clear-cutting in one area might improve wildlife habitat, while a slight difference in natural conditions, timber species, or cutting technique only a few miles away might have exactly the opposite effect. The main difference is planning that recognizes both wildlife and timber as valuable forest resources.

Who knows? With leased hunting land now going for as much as $1.50-$2.00 per acre per year, perhaps wildlife might one day be more profitable than trees . . .

# St. Simons

# *Under Five Flags*

**by Joe Cullens**

Photos by Bob Busby

The tiny vessel tossed through another interminable night, a seemingly less-than-seaworthy speck pitching about on the fluorescent sea. But just as the tense and battered crew began to wonder if the five month voyage was the beginning of an eternal damnation, salvation sounded in the single cry: "land."

*Christ Church was founded in February of 1736 as a mission of the Church of England under the Reverend Charles Wesley. The current structure was built on the original site in 1884.*

*The ruins of Retreat hospital, Retreat Plantation's medical facility for its slaves. The Sea Island Golf Club now is located on the plantation's lands.*

The Spanish discovery of Georgia's coastal islands is believed to predate Ponce de Leon's arrival by almost ten years, for navigational charts from the early 1500's plot several of the islands as part of the Province of Guale, in northern Florida. Some four hundred years later, Georgia's Golden Isles are charted as one of the Atlantic Coast's most beautiful resort areas.

For many years the coastal islands (Cumberland, Sapelo, Jekyll, Saint Catherine's, Ossabaw and Saint Simons) were known as "The Golden Isles of Guale" (pronounced "Wallie") in honor of Chief Guale, an Indian befriended by Pedro Menendez de Avilles. Avilles, the founder of Saint Augustine, Florida, established the first of many Spanish settlements on the Georgia coast. The period of Spanish missions lasted more than 100 years until about 1686.

Four other flags—those of France, England, the Confederacy, and the United States—have waved in the sea breeze over the islands in the last 400 years, but Saint Simons' early history indicates that Indian tribes inhabited the area long before the coming of white settlers. A large Indian village is believed to have existed on what is now the island's airport. More than 80 burial sites found there contain pottery and stonework dating to well before 1500. Since this pottery can be divided into two distinct types, it is believed that at least two different groups (probably the prehistoric Timucuan and Hichiti tribes) inhabited the area.

The first "civilized" settlement was the Spanish Mission of San Buenaventura. Remnants of this mission were found by British settlers in 1733.

Under British rule after the founding of the Colony of Georgia in 1733, the coastal islands were settled by General Oglethorpe as a buffer against the Spanish settlements in Florida. Fort Frederica was built on Saint Simons and garrisoned with British soldiers. The Battle of Bloody Marsh in 1742, a turning point in American colonial history, led to cession of Spain's Florida holdings to Great Britain in 1763 and thus removed the "Spanish threat," ending the need for military presence on the Georgia coast.

Saint Simons became the home for many of the soldiers who fought during the war with Spain. Land grants were made, and the fertile soil of the island reverted to the quiet of agriculture until the Revolutionary War began. Many island homes were destroyed by the British fleet's bombardments and the town of Frederica was obliterated. Today's fragmentary remains are mute tribute to this colorful period in Saint Simons' long past.

Unlike many of the coastal islands, Saint Simons never was controlled by any one family or corporation. The greatest consolidation came after the Revolution when large plantations like Hampton Point, Cannon's Point, West Point, Harrington and Retreat were created by entrepreneur owners. The "Old South" is perhaps best represented by life as it was on these plantations in the time when cotton was the leading cash crop and Sea Island cotton was especially prized for its quality. But the Civil War ruined the grandeur of the old south and the 19,000 cultivated acres on Saint Simons did not escape. The once great planter families fell destitute.

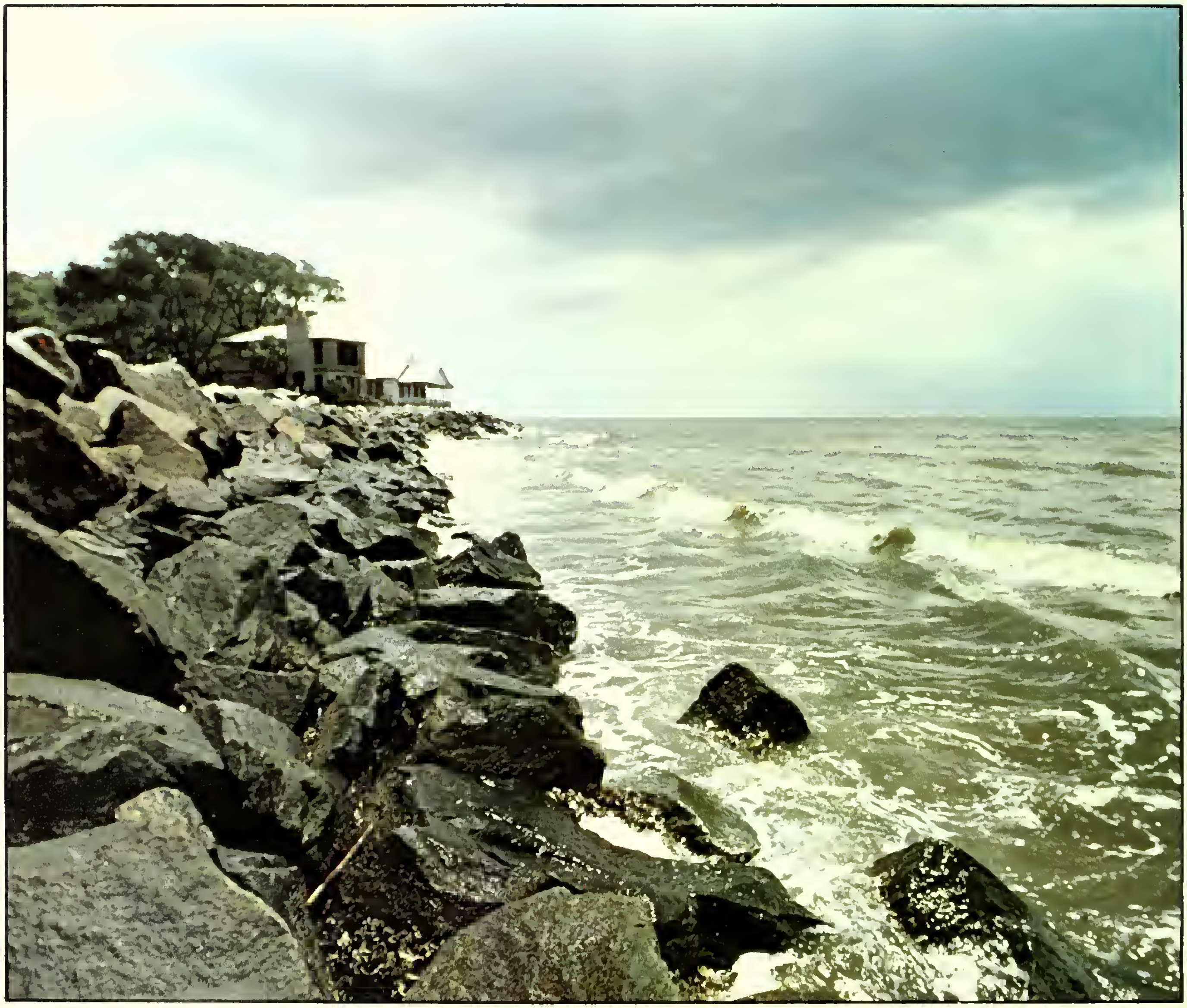
Development of the island as a resort began soon after the war. In 1881 a boat line began to provide passenger service on a regular schedule between Brunswick and Saint Simons. Six years later a pier was erected on the southern end of the island, and construction began on the Saint Simons Hotel. It was completed in 1888, but burned nine years later and was not replaced until 1910.

The extension of U.S. Highway 17 over the Altamaha River in 1921 opened the Brunswick area to more tourists, and their enthusiasm for Saint Simons forced the building of a causeway to the island in 1924. Two years later, Howard Coffin, the developer of the Sea Island resort community, bought his first land on Saint Simons. His famous Cloister Hotel was finished in 1928.

Many private homes have been built on the island, but in the past few years development has switched to vacation and second-home communities. Condominium and apartment complexes are rapidly being built.

Environmentalists have fought attempts to develop Saint Simons into a commercial resort, but increased cooperation between developers, government officials and individual property owners has eased the tension somewhat. Several lawsuits, however, have been filed to prevent further development of beachfront properties held by developers.

A great deal is at stake in the development of Saint Simons. For years, the island lay dormant, but in the 1960's development almost outstripped control. While the arguments over present and future development continue, perhaps Aldo Leopold offers an indication of Saint Simons' true value to man: "It is a century now since Darwin gave us the first glimpse of the origin of the species. We know now what was unknown to all the preceding caravan of generations: that men are only fellow-voyagers with other creatures in the odyssey of evolution. Our ability to perceive quality in nature begins, as in art, with the pretty. It expands through successive stages of the beautiful to values as yet uncapture by language." The beauty of Saint Simons remains its ultimate value, a resource available to all. The "Golden Isles of Guale" have faded into history, but with caution we can preserve a monument to this once glorious past.



# Well-loved Dove

Dove season again is split into two segments and divided into north/south regions (see the map for the dividing line).

| **North:** | **South:** |
|---|---|
| Sept. 7 through Oct. 26 | Sept. 28 through Oct. 26 |
| Dec. 14 through Jan. 2 | Nov. 30 through Jan. 9 |

Shooting hours are from **noon** until **sunset.**
The bag limit is **12,** the possession limit **24.**

**by Aaron Pass**

Art by Liz Carmichael Jones

The speedy mourning dove is Georgia's favorite gamebird, even surpassing the bobwhite quail. Many factors account for this esteem, and mostly they are unique to doves and dove hunting.

Certainly, one of the most important factors in the dove's popularity is the early opportunity for hunting. Legal dove shooting normally begins long before other small game seasons open. This, added to the dove's statewide abundance, generally assures a good turn-out on opening day.

According to Game and Fish Division statistics, more Georgia hunters harvested more doves in 1972-1973 than any other small game. The first half of the season saw 121,727 hunters harvesting 2,204,869 doves. In contrast, quail drew 118,093 hunters who bagged 2,672,194 birds. During the entire season the statewide harvest was 3,590,338 doves.

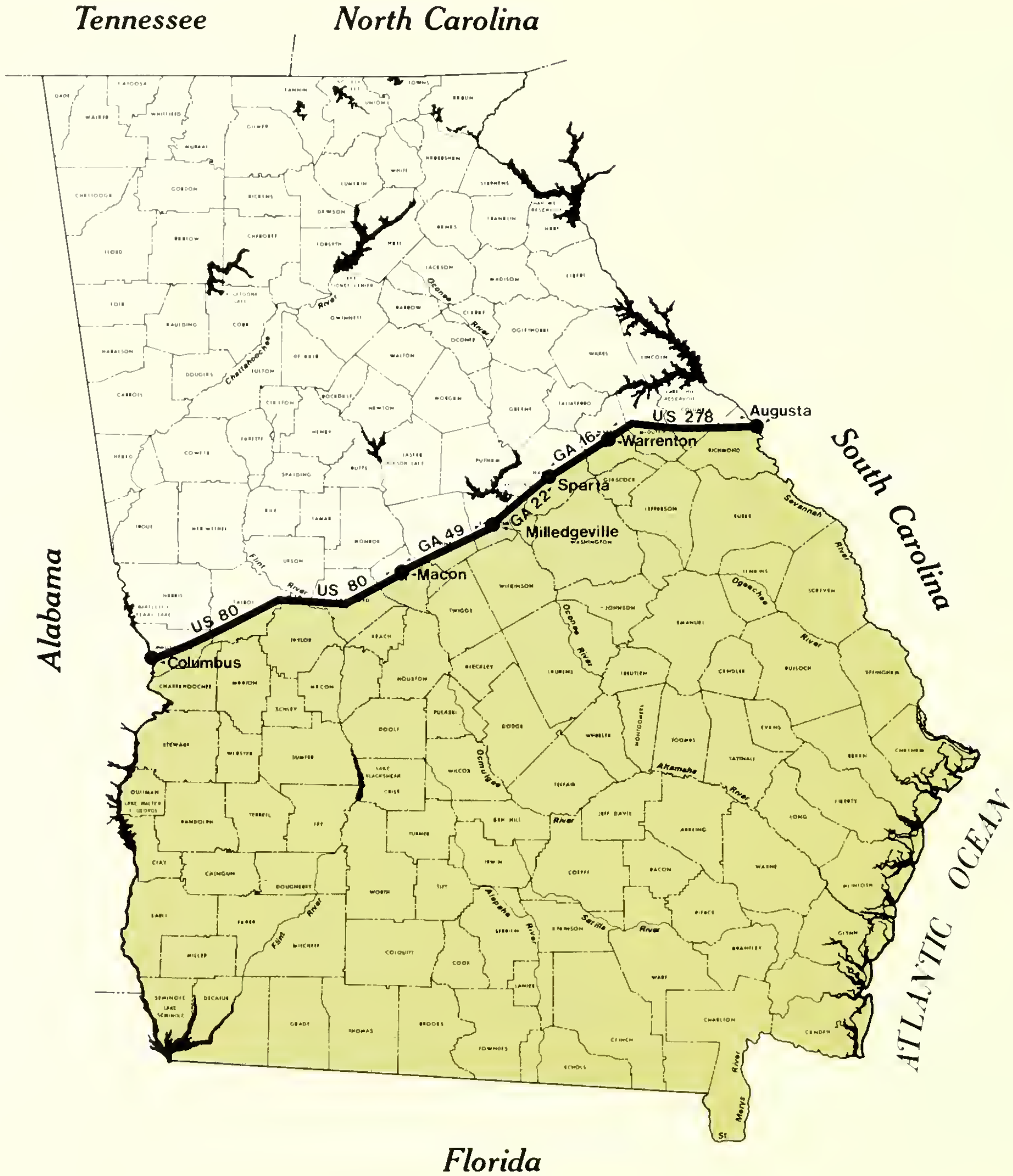
Dove shooting is unique among American styles of hunting. It's much less physically demanding than most other forms. There's no need to rise from a warm bed in pre-morning blackness or stumble around in sub-freezing temperatures. By law dove shooting is limited to the afternoon and the season usually opens during September's "Indian Summer." In most hunting, the shooter must wander about in search of his quarry. Not so with the obliging dove; the hunter merely sits down and waits for the dove to come to him.

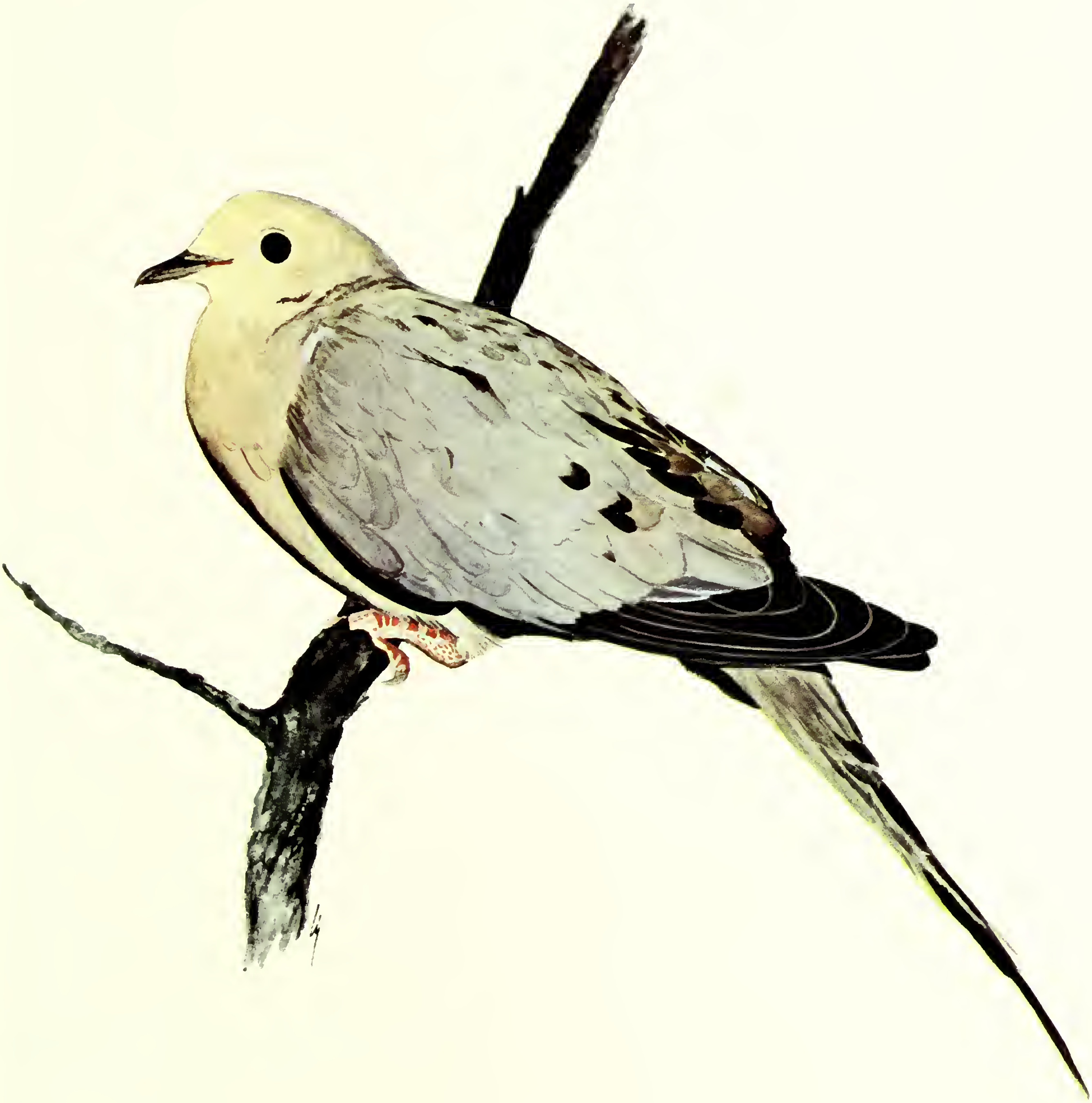
Another interesting feature of dove hunting is its social aspect. Solitude normally is a prerequisite for a successful hunt, but in most dove shooting it is a disadvantage. If a lone hunter approaches doves feeding in a large field, they usually fly to the other end and resume lunch. If he goes to that end, the doves will just fly back. Thus many hunters are needed to keep the doves moving. Another aspect of this is that dove hunting demands little woodscraft—it's pretty hard to get lost on a crowded field.

Dove shoots normally occur near freshly harvested fields where the birds come to feed on the waste grain and seed left by modern harvesting equipment. This points out another major dissimilarity between the mourning dove and other small game. As the economic necessities of modern agri-business and forestry demand more production on less space, the traditional brushy coverts for rabbit and quail are rapidly disappearing. Replacing these are large, efficient field crop and pine tree monocultures which tolerate no "wasted" space along fencerows and field borders. Doves apparently can utilize this non-habitat better than other species and are not declining with the cover.

If, so far, dove shooting sounds ridiculously easy, don't be misled. Probably more doves are "mis-led" than all other small game combined. The national average indicates that for every dove brought to bag, the average shooter fires five shells. The dove's speed and well-known dodging tactics make him a real test of the wing-shooter's prowess. Drifting in against an open sky, doves may appear to be loafing along —while actually cruising at 30 to 40 m.p.h.! At the first shot, the dove can turn on a burst of additional speed and go into a series of evasive maneuvers that leave all but the best shooters with an empty gun and an equally empty bag.

Doves are abundant, available statewide, and are relatively easy to hunt. They furnish sporty shooting and generous bag limits. As if all these attributes weren't sufficient, doves are tasty as well. Little wonder they are the state's most popular gamebird.





# Bow hunting primer

**by Gibson Johnston, Jr.**

Art by Jose Vinas

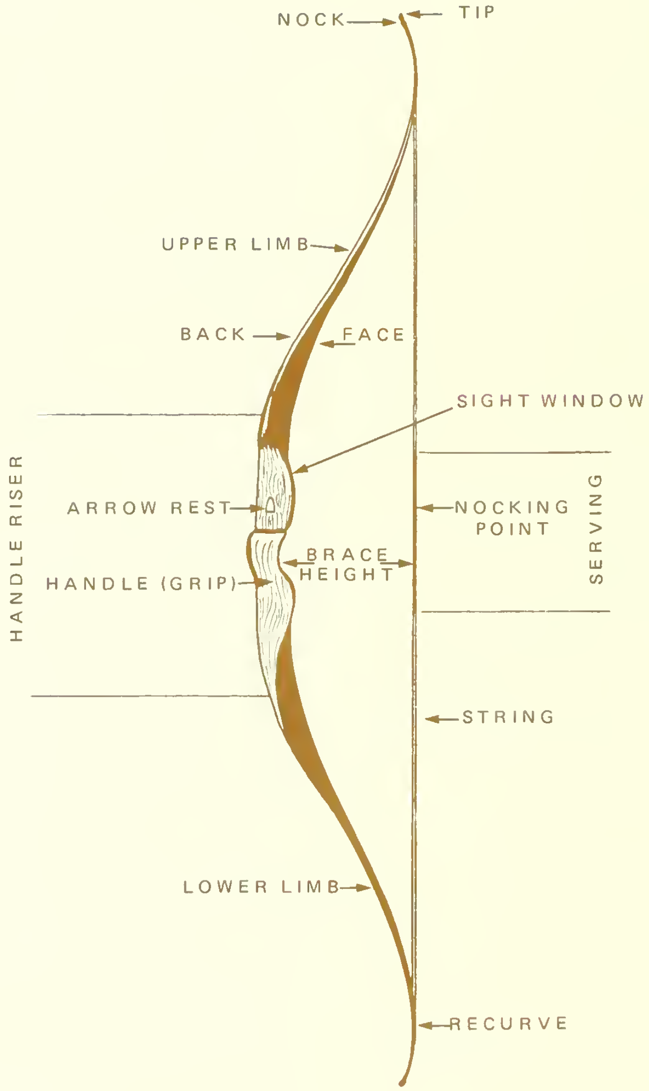
So you'd like to be a bow hunter? You know the odds are stacked against you: you'll helplessly watch deer that any self respecting gun hunter could easily bag, you can't shoot long ranges or through brush, you'll ache in muscles of which you were unaware.

But don't be discouraged, for, despite its inconveniences, bow hunting probably is the most satisfying and sporting form of hunting. And once you try it you'll be hopelessly hooked.

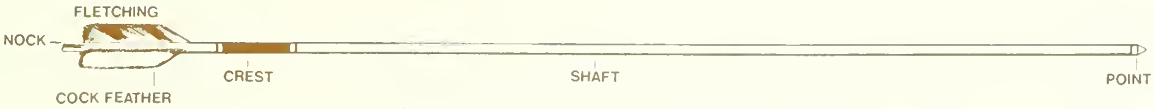
To get started properly, find a good sporting goods store, one that specializes in archery gear. Among the personnel will be folks who know archery and probably a bow hunter or two. Ask for advice and take it. Many stores sell archery equipment, but most do not have an employee who is an archer. Gear is cheaper in these stores, but this is false economy, since there usually is little recourse should something go wrong.

Selecting a bow can be a frustrating experience, for they come in all sizes, colors, and prices. Basically, there are four types of bow: the straight bow, the recurved bow, the compound bow, and the cross bow. Compound and cross bows are illegal for hunting in Georgia.

The best choice for hunting is the recurve bow. Although this bow comes in many configurations, all involve limbs whose tips curve toward the target when strung (or "braced").



parts of a Bow



the parts of an arrow

This bow imparts greater speed to the arrow and provides better overall performance.

Bows are constructed from metal, wood of all sorts, plastics, fiberglass, or combinations of these. A laminated bow, usually made of fiberglass and wood, will cast an arrow consistently and is less subject to fatigue than bows of other materials.

Another consideration is the bow's length. Here too, there are many variations, ranging from 45 to 72 inches in standard factory models. Short bows are easier to carry in the field, can be handled easily in brush, and will cast the arrow faster, so they normally are selected for hunting. However, to add to the confusion, longer bows are easier and more stable to draw, are smoother on the release, and are more accurate. The size range for these two general classifications is arbitrarily set at 45 to 60 inches for short bows and 60 to 72 inches for long bows.

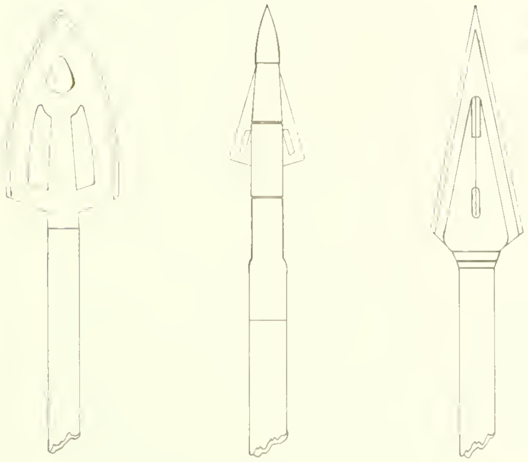
Still another factor to consider in selecting a hunting bow is "draw weight," or, simply, "weight." This has nothing to do with how much the bow weighs, but refers to the amount of force necessary to pull the string a given distance, usually 28 inches. It's a serious mistake to try to prove your manliness by owning a 75 or 80 lb. bow. These are for the experienced archer and then only for special purposes: cape buffalo and elephant have been killed by arrows from bows of 70 lb. weight. A good average hunting bow has a draw weight of about 45 lbs. (40 lbs. is the minimum legal weight for hunting in Georgia.)

A good choice for hunting is a laminated recurved bow about 60″ long with a 40-50 lb. draw weight. It can cost anywhere from $35 to $250.

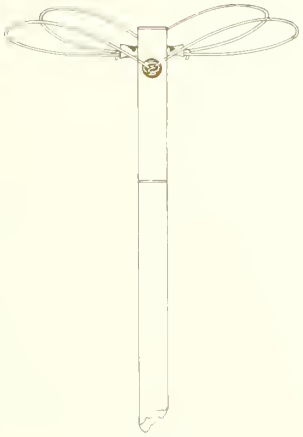
A bow without arrows is useful only as a club. Therefore, as much care should be exercised in selecting arrows as in choosing the bow. Arrows are available for $.50 each at many stores, but this is more false economy.

Arrow shafts are made of wood, fiberglass, and aluminum in various qualities. Top grade wooden arrows are cedar. Fiberglass and aluminum arrows should be tubular.

"Spine" describes the characteristic of the arrow that allows it to curve around the bow and recover to fly straight, or, more simply, stiffness. Spine (expressed in pounds) is recommended for each corresponding bow weight. Proper spine is crucial for accuracy; and since spine is a function of weight, all your arrows should be of the same weight.

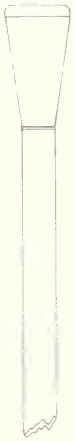


hunting points



snare point

field point

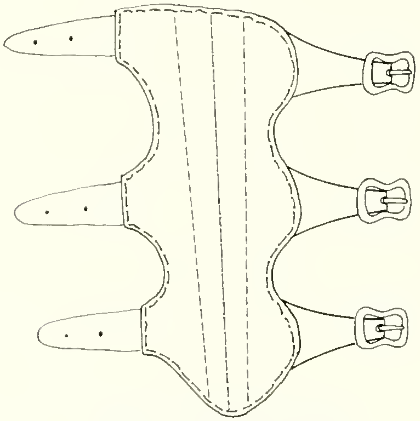


blunt point

target point

Arrow length is measured in inches from the nock to the base of the point, and proper length varies with the archer. To determine the length, draw your bow—using a 40″ dowel for an arrow—until your "anchor point" (where the string comes to rest against your face) is consistent and feels comfortable. Then draw fully, and have a friend mark the arrow at the farthest point on the bow. The distance from the end to the mark is the proper arrow length for you.

"Fletching" is the feathers of an arrow. The general arrangement is three feathers or vanes set at 120 degree intervals near the end of the shaft, although four vanes sometimes are seen. The "index vane" or "cock feather" is set at right angles to the nock, and usually is colored differently from the others. Vanes are made of turkey feathers or plastic.

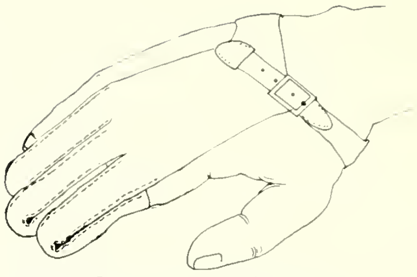

armguard

Points or broadheads come in a fantastic array. They may be spiraled, 2-bladed, 3-bladed, or 4-bladed, reversed or blunt; but the choice is a matter of individual preference. The 4-bladed probably is most popular. Most arrows are available with adapters that allow interchanging field points of the same weight for practice. This is an important consideration, since it allows practice with the same arrows that will be used in the hunt. Hunting points must be razor sharp.

Good arrows with hunting points in cedar cost about $1.50 and in fiberglass or aluminum about $3.00. You'll need at least six.

Now you're ready to hunt, right? No! There are a few other necessities to be bought:

1) A shooting glove or tab. This device protects the fingertips when drawing the bow, and costs from $1.50 to $5.


archery glove

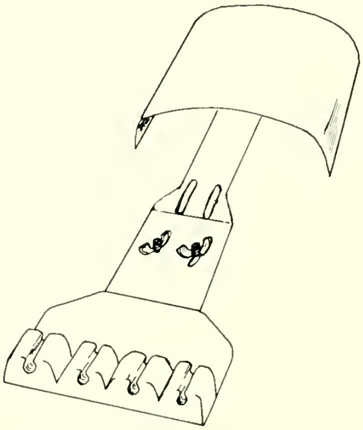
2) An armguard. It protects the forearm of the bow hand from the string, which moves at great speed and can inflict a painful slap. Armguards cost $2 to $5.

3) A quiver. It holds extra arrows. Some stand on the ground, some are worn on the belt or back and others attach to the bow. The latter is most popular among hunters and costs $3 to $20.

So, for less than $100, you're ready to hunt. But one thing that money cannot buy is skill. Practice shooting at all ranges in all positions. Do it daily until you develop confidence in your skill with the bow.

One hour spent with a good teacher will do more for your ability than ten hours of solo practice. You cannot recognize your own bad habits easily; another bowman can. Proper instruction and practice can make a bowman a respectable marksman; then he is ready to try his luck as a bow hunter.

Soon you'll know your weapon's capabilities and limitations . . . and your own. Experience will improve both. Sooner or later that trophy buck will present himself when all the conditions are right. It may take a while, but by then you'll be hooked . . .


BOW QUIVER

# Outdoor World

## CONDITIONING YOUR DOG

The signals are clear; autumn is approaching. For millions of American sportsmen, the signals also have another meaning. Hunting seasons are coming.

You probably are not alone in sensing the change in the air; your dog needs no calendar to tell him what time of year it is, his nose already is sifting out old familiar messages from the freshening breezes.

Hunting with a dog can be a double blessing since it can enhance both your enjoyment of the sport and your success as well. But, before you put your four-footed game finder back in action, it is only fair to give him the preseason tune-up he deserves for top performance.

For example, a dog that has been confined to the kennel or a limited run for a number of months should have the opportunity to unlimber his summer-soft muscles and develop his stamina before being asked for a hard day's hunt.

Starting at least a full month before actual hunting begins, if possible, he should be given a run of 15 to 20 minutes a day, stretched out to an hour or two on weekends. This really is all he needs to get in shape and it will also harden up his pads for the tougher trekking ahead.

This also is the best time to re-establish his quick response to basic obedience commands. No more than ten minutes a day need be devoted to this phase of his preparation, but it is important. A dog that won't respond properly afield can be more of a hindrance than a help.

While you don't want a fat field dog, remember to adjust his diet to his increased activity. A good hunting dog should be slim but not starved. Colder weather alone will increase his fuel requirements. You can help meet this need by adding a tablespoon or two of lard to his daily winter ration. But, if he's picked up some summer suet of his own, let him run this off before upping his feed.

Finally, remember to match the demands on your dog to his age. Veteran dogs are much like veteran hunters. They still have the desire and enthusiasm, abetted by a treasure of acquired experience. But their work should be paced out more carefully, with judicious resting periods in between. Work him right and his savvy will substitute for his staying power.

*Clark Webster,*
*Manager*
*Remington Farms*

# Book Reviews

## WATER: A PRIMER

by Luna B. Leopold, W. H. Freeman Co., 172 pp., $4.95 (hardbound), $2.95 (paperbound).

"In the Middle Ages people believed that the water in the rivers flowed magically from the center of the earth," says Luna B. Leopold in this new book. Considering the fact that water is something we daily fish in, swim through, boat on, look at, nap by, pray for, or day-dream about, most people haven't come a very long way since the Middle Ages.

The thought now is 1) water comes from a faucet, or 2) comes from around the bend upstream, or 3) surface water is part of the hydrologic cycle. If you have believed either of the first two theories, you need to get this book right away before your kids start asking you embarrassing questions. If you believe the third, you should read it to discover you're right for a change.

It's one of those books that most people probably never would pick up, because, really, who wants to read a book about water when there's a good TV show on? That's too bad, because:

Do you know how to look at a river and tell how often a set of riffles and pools will occur (where the fish are)? or

How many gallons of water you use every time you take a shower or flush the toilet (a good statistic to have on hand when there is a lull in the conversation)? or

What really causes rain and snow (all of us think we do until asked to explain it)? or

Why do some soils erode faster than others (you know they do, but I dare you to tell me why)?

*Water: A Primer* lets you in on all that.

Maybe you won't read it all (even though it's only about 170 pages long). Maybe you won't understand it all. But wouldn't it be nice to read something that's really worth your while for a change?

*Jim Wilson*
*Resource Planning Section*

## PRACTICAL FISHING KNOTS

by Lefty Kreh and Mark Sosin, Crown Publishers, Inc., 160 pp., $5.95 (hardboard).

In the great horde of "sportsmen's" books vomiting off the presses these days, very few really are worth reading, and even fewer worth owning. Yet each member of the multicolored horde claims to be the book "every sportsman should own."

And that makes it hard to describe a book like this one. It *is* a book every serious fisherman should have. Really.

It's a model of lucid and economical explanation. Kreh and Sosin say what they need to, illustrate the point clearly, then move on. They don't need the "me and Joe in the Yucatan" examples that less confident writers rely on, and they don't waste the reader's time with "impressive" esoterica.

The book is, above all, practical. The writers present knots that any serious fisherman *should* know, not all the knots he might someday want to know. It is reasonable to argue, of course, that all fishermen should be competent marlinespike seamen; but that's outside the scope of this book. The authors provide a few obvious knots for boaters, but only as an afterthought.

Most freshwater fishermen will be surprised at Kreh and Sosin's emphasis on the Bimini Twist. They call it "the most important knot you can learn," an opinion probably not shared by many bass and trout fishermen. Although this complex and somewhat exotic creation has unchallengeable value in saltwater and in heavy freshwater fishing, most Georgia anglers probably can survive with a good clinch or palomar knot.

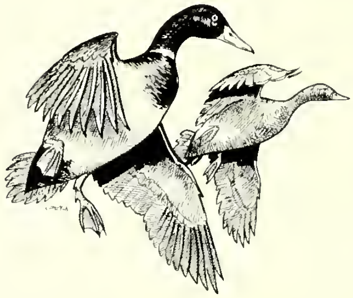
Each of the latter approach 100 percent of the line strength, and either of them is easier to master than the Bimini Twist. But there is no question that the Twist should be among the knots that serious anglers know.

The illustrations are superb! It's a shame that the photographer remains unnamed, for his work adds about 60% to the book's value. The sketches are good, but the backlit photography illustrates tying much more clearly than any other technique. There's just no room for confusion in this careful combination of words and pictures.

All in all, then, this is a clearly written, practical book that sets a limited goal and achieves it almost perfectly. It is a model of its kind.

And it's a book serious fishermen should own.

*TCM*



## DUCKS, GEESE AND SWANS

by Oscar J. Merne, St. Marten's Press, 160 pp., $6.95 (hardbound).

As an avid duck hunter, I thought I was up on waterfowl. I was wrong. After reading this book I realize that I understand the waterfowl of the world about half as well as the average Arab understands Hebrew.

My first impression said this book wasn't worth its price. What shaped my opinion was the elegance usually associated with waterfowling tomes. But the more I looked into it the more I realized that Merne's work is a great little book, well worth the price of a restaurant steak and just as meaty.

Did you know that a whole family of South American ducks

(Torrents) live exclusively in torrential streams and swim underwater for their food? Did you know that mallards in the Philippines are red heads? Did you know that some waterfowl migrate—not from arctic or anarctic areas to temperate climes—but from high mountains to coastal lowlands? Neither did I.

I still believe our male wood duck to be the most beautiful duck in the world. What I didn't realize until now is the stiff competition the woodie has beaten to earn that title. The European shelduck and Chile's torrent duck run our woodie a very close race on beauty.

This tight little book has something to say about each of the world's 151 species of waterfowl. And the little distribution maps showing breeding and winter ranges provide useful information. The color illustrations are adequate.

There's some humor and sadness in the book, too. Not on purpose, of course, which makes it all the more poignant. You can tell a non-American waterfowler wrote the text, especially on page 25 where it says that "decoys" are used to imitate the call of ducks and geese over "lifelike floating models" near the "fowler's hide." The Irish use some of the same words as we, but different meanings: our call is their decoy, our decoy their model and our blind is their hide.

Still, most of the words have the same meaning. In these meanings is the sadness. Merne notes that, "There are many people who still depend on wildlife as their main source of protein, or who make their living as professional wildfowlers. . . ." Really? In 1974? Visions of grimly efficient market hunters in South America, Asia and Siberia ominously going about their business can mean only one result for the waterfowl on those continents.

Punt guns are, according to Merne, rare but still in use. These contraptions (shotgun cannons mounted on flat skiffs or punts) can wipe out whole flocks of waterfowl. Outlawed here for 60 years, we still can feel their effects in diminished duck populations.

Humor, sadness, information. This little book surprised me with its completeness. If you like waterfowl but don't want to blow a few hundred bucks on a definitive study of the world's waterfowl (and who does?) I'd recommend this little book.

*Bill Moorehead*
*Environmental Education Coordinator*

# Outdoor Calendar

SEASONS OPENING:

DEER (archery) — Sept. 28 through Oct. 26 in Game Zones I, Ia, II, III, and IV. Sept. 28 through Oct. 14 in Game Zones V and VI.

DOVE (first season) — Sept. [illegible]7 through Oct. 26 in the northern zone, Sept. 28 through Oct. 26 in the southern zone.

RAILS — Sept. 14 through Nov. 22.

SEASONS CLOSING:

SQUIRREL (early season) — Sept. 7 in Harris, Talbot, Upson, Monroe, Jones, Baldwin, Hancock, Warren, McDuffie, Columbia and all counties north of these.

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